Trinity Delta

Scancell

Update

COVID 2nd generation vaccine opportunity is all upside

11 May 2020

Scancell is initiating a collaborative research project that aims to use its oncology vaccine expertise to develop a second generation COVID-19 vaccine. Its DNA vaccine technologies target dendritic cells and have proven ability to stimulate high avidity and potent T cell responses. The objective is to produce a simple, safe, cost-effective, and scalable vaccine to induce both durable T cell responses and virus neutralising antibodies to SARS-CoV-2 infection. Subject to funding, including non-dilutive grants from governments, a candidate vaccine could enter Phase I trials in Q121. Scancell's primary focus remains on developing its innovative immuno-therapies for cancer, as detailed in our May 2020 Outlook. The early nature of the COVID-19 project means that we currently do not include it in our £72.4m (15.6p/share) Scancell valuation.

Year-end: April 30	2018	2019	2020E	2021E
Sales (£m)	0.0	0.0	0.0	0.0
Adj. PBT (£m)	(4.9)	(6.7)	(6.8)	(7.6)
Net Income (£m)	(4.2)	(5.6)	(5.7)	(6.4)
Adj. EPS (p)	(1.3)	(1.5)	(1.2)	(1.4)
Cash (£m)	10.3	4.6	3.5	7.0*
EBITDA (£m)	(4.9)	(6.7)	(6.8)	(7.7)

Source: Trinity Delta Note: Adjusted numbers exclude exceptionals; * FY21 Cash includes a capital increase of £10m

- **Collaboration ties up with academic centres** Scancell has initiated a collaboration with the University of Nottingham and Nottingham Trent University to develop a vaccine against SARS-CoV-2, the coronavirus that causes COVID-19. Realistically, the objective is not to be the first commercially available vaccine, but rather to create a vaccine that produces more potent and longer lasting immune responses. Additional development partners are actively being sought with external funding, including non-dilutive funding from governments and institutions, also expected.
- **DNA vaccine expertise will be employed** Scancell's vaccine platforms have proven ability to achieve efficient direct and cross-presentation of specific epitopes with a consistently strong immune response. The combination of its existing expertise, coupled with specific academic coronavirus knowledge, will work towards creating a simple, safe, cost-effective, and scalable vaccine that is able to induce both a durable T cell response and virus neutralising antibodies to SARS-CoV-2 infection.
- **Oncology remains the core focus** Scancell is committed to its core cancer immunology franchise, which remains the main focus of its development efforts. The nature and scope of the two therapeutic vaccine platforms, ImmunoBody and Moditope, together with the prospects for AvidiMab (antibodies that target glycans) are discussed in our comprehensive May 2020 Outlook report.
- **rNPV model suggests a valuation of 15.6p/share** The early nature of the COVID-19 project means that we currently attribute no explicit value to it, but will review this as progress becomes more visible. Our valuation for Scancell, based on a rNPV model with conservative assumptions, is £72.4m, equivalent to 15.6p a share.

Price	7.5p
Market Cap	£34.9m
Enterprise Value	£31.4m
Shares in issue	465.4m
12 month range	4.03p-10.0p
Free float	68%
Primary exchange	AIM London
Other exchanges	N/A
Sector	Healthcare
Company Code	SCLP.L
Corporate client	Yes

Company description

Scancell is a clinical-stage immuno-oncology specialist that has three technology platforms. Two flexible therapeutic vaccine platforms are progressing through development. ImmunoBody and Moditope induce high avidity cytotoxic CD8 and CD4 responses, respectively, with the potential to treat various cancers.

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Scancell: exploiting its expertise to target COVID

COVID-19 may have wider ranging repercussions for R&D companies

The COVID-19 pandemic and associated governmental policies, such as travel restrictions and physical distancing present, operational challenges to corporates irrespective of industry. Pharmaceutical and biotech companies are also uniquely impacted by other factors, including their ability to access clinical and healthcare resources in an environment where priorities may be changed. COVID-19 may have repercussions on Scancell's operations and its R&D timelines; however, it also presents an opportunity for the company to leverage its expertise and know-how to develop a potential vaccine against SARS-CoV-2, the coronavirus that causes COVID-19.

Initiating a collaborative project to create a COVID-19 vaccine

Scancell has announced the initiation of a research programme to develop a vaccine for COVID-19. The project will initially be a three-way collaboration between Scancell, the University of Nottingham, and Nottingham Trent University. While Scancell's primary focus remains on developing its innovative immuno-therapies for cancer, its expertise in developing DNA vaccines that stimulate the body's own immune system has potential application in addressing infection with coronaviruses. Additional development partners are actively being sought, with external funding, including non-dilutive funding from governments and global institutions, also expected. Assuming smooth progress, a Phase I clinical trial (likely to be named "COVIDITY") could initiate in Q121.

Scancell has two therapeutic vaccine platforms (described in May 2020 Outlook): **ImmunoBody** vaccines have an elegant design that targets dendritic cells and achieves efficient direct and cross-presentation of specific epitopes with a consistently strong immune response; **Moditope** is unique and specifically targets cancer cells, so should be viewed as a totally different class of therapeutic vaccine. Scancell, with its collaborators, aims to use this proven clinical expertise in cancer to produce a simple, safe, cost-effective, and scalable vaccine that is able to induce both a durable T cell response and virus neutralising antibodies (VNAbs) against COVID-19.

Past experience shows that a potent vaccine is needed

To date tracking, testing, and isolation approaches have contributed to flattening the COVID-19 incidence curves in many countries in order to allow health systems to cope. However, as the 1918/9 influenza pandemic shows, successive waves of infection should be expected and, despite much debate around "herd immunity", arguably the only viable long-term strategy to address both the human and economic costs requires an effective and widely available vaccine.

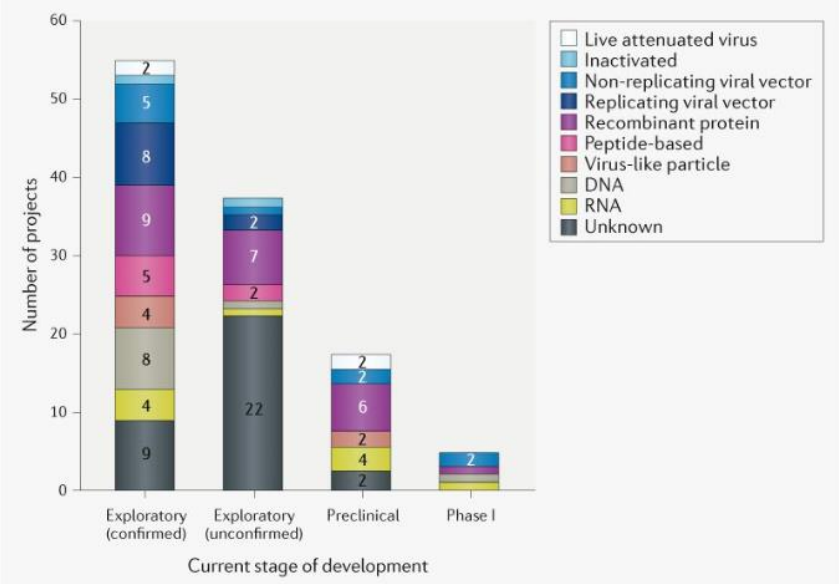
COVID-19 vaccine development landscape

Praiseworthy commitment and speed by the key players

The scientific community's response to the COVID-19 pandemic is impressive. The genetic sequence of SARS-CoV-2, the coronavirus that causes COVID-19, was published on 11 January 2020 and the first COVID-19 vaccine candidate, Moderna's mRNA-1273 vaccine, entered Phase I clinical trials on 16 March 2020. Yet despite unprecedented financial support, for instance BARDA (the Biomedical Advanced Research and Development Authority, a US government agency) granting up to $483m, the likelihood of a vaccine being commercially available is unlikely for at least 12-18 months. Moderna may have been the first but it is not alone. As of 8 April 2020, there are 115 vaccine candidates (Exhibit 1); of these 78

are confirmed as active with five in Phase I studies and 73 in exploratory and preclinical stages.

Exhibit 1: Pipeline of COVID-19 vaccine candidates by technology platform



Source: Nature Reviews Drug Discovery, April 2020

A wide array of vaccine creating approaches are being employed

WHO maintains a live list of the known vaccine programmes that understandably covers a very broad range of platforms and techniques. The most prominent are nucleic acid (DNA and RNA), virus-like particle, peptide, viral vector (replicating and non-replicating), recombinant protein, live attenuated virus, and inactivated virus approaches. Typically, using the experience with influenza as a proxy, it would be the DNA or mRNA platforms that offer greater flexibility in terms of antigen manipulation and the most potential for rapid development. Currently there is little firm information on the specific SARS-CoV-2 antigen(s) that are being targeted, but a common theme appears to be to induce neutralising antibodies against the viral spike (S) protein, preventing uptake via the human ACE2 receptor. Experience with SARS suggests immune enhancement benefits from employing a combination of different antigens.

History suggests that a speedy solution is not likely

Despite the huge amount of effort, resources, and money being directed towards finding a vaccine, it should be remembered that expectations of an effective vaccine becoming available within a timeframe of 12-18 months may be ambitious. The development time of a traditional vaccine is around 10 years and the success probability is low (c 6%). Even using novel approaches, co-ordinated development, and adaptive trial designs, the first Ebola vaccine took five years. Hence, whilst calls for unprecedented collaboration, novel workstreams, and multi-disciplinary approaches may be well-meant, we suspect that a genuinely effective vaccine will not be commercially available for some time.

Preparing a second-generation COVID-19 vaccine

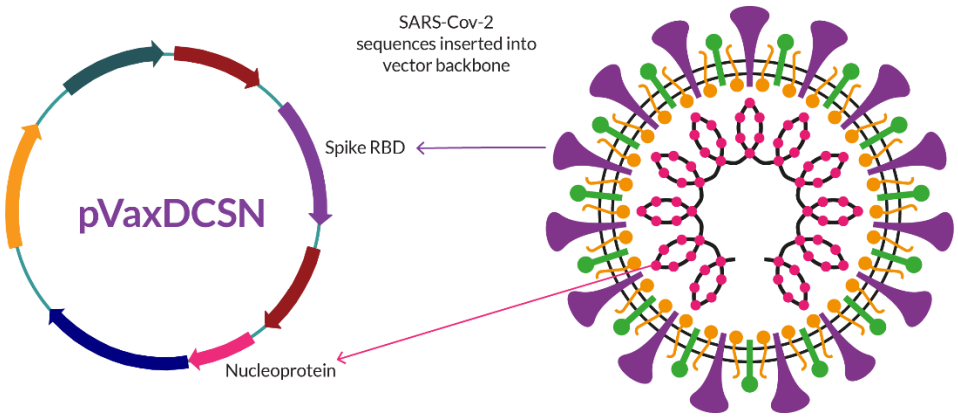
Scancell's proposed DNA vaccine has a two-pronged approach and is designed to address the SARS-CoV-2 nucleocapsid (N) protein and the key receptor-binding domain of the spike (S) protein to generate both high avidity T cell responses and VNAbs. The N protein is highly conserved amongst coronaviruses; hence it should

Goal to produce a better, more potent and versatile vaccine

have the potential to provide protection not only against SARS-CoV-2, but also against future new strains of coronavirus. The objective is not to be the first viable vaccine to reach the market, but to create a vaccine that can produce more potent and longer lasting immune responses, particularly in vulnerable populations with potentially weaker immune systems such as the elderly.

Exhibit 2 provides a graphic representation of Scancell's potential vaccine. It is injected as a small DNA plasmid (pDNA) which encodes two of the COVID-19 proteins: (i) the nucleocapsid (N) (in pink), and (ii) part of the outer spike (S) protein (in purple). The plasmid has an identical backbone structure to ImmunoBody SCIB1, which has already been shown to be safe in humans; the N protein has been designed to induce strong T cell responses, while the immune system will generate neutralising antibodies against part of the S protein. Of interest is that SCIB1 was able to induce potent T cell responses in 88% of immunocompromised melanoma patients, most of whom were over 50 years of age.

Exhibit 2: Scancell's SARS-Cov-2 vaccine



Source: Scancell

Collaborators couple DNA vaccine and virology expertise

The COVID-19 vaccine project will initially be a collaboration between the Centre for Research on Global Virus Infections and the Biodiscovery Institute at the University of Nottingham, together with Nottingham Trent University and the John van Geest Cancer Research Centre. Professor Lindy Durrant, Scancell's Chief Scientific Officer and also Professor of Cancer Immunotherapy at the University of Nottingham, will lead the project. Additional collaborators are expected to be brought on board as progress is made.

An early programme that is difficult to value

No value ascribed to a COVID vaccine in our model yet

We value Scancell using a using a DCF model, where the rNPV (adjusted for the likely success probabilities) of each of the three most advanced oncology projects - SCIB1 in melanoma, SCIB2 in NSCLC, and Modi-1 in solid tumours, including ovarian cancer, triple negative breast cancer (TNBC), renal cancer and head & neck cancer - are summed and netted against the costs of running the operation. The details of our valuation are outlined in our May 2020 Outlook note. Notably, we only include the later stage, more visible, programmes and, for instance, ascribe no explicit value to the earlier stage AvidiMab platform at this stage.

Similarly, the COVID-19 programme early stage and the number of variables, and relative unknowns, is so wide that, regardless of the clear medical need and

obvious commercial potential, in line with our valuation philosophy we currently do not assign an explicit value to this programme either.

Despite adopting a conservative approach throughout, our valuation for Scancell is £72.4m, or 15.6p per share. Upside potential could be realised by development progress from the three lead oncology assets, and from greater visibility over time on the AvidiMab and COVID-19 programmes.

Broader COVID-19 impacts

The COVID-19 pandemic comes with many uncertainties

The COVID-19 pandemic is associated with many uncertainties, some connected to its epidemiology, others to its potential scope and duration, and to governmental responses that attempt to moderate its effects on society. COVID-19's transmission potential has not yet been determined, nor the level of immunity in various populations, nor the likelihood and magnitude of a potential second peak as lockdowns are exited.

Restrictions on movement present operational challenges

Global policies vary by country but there is some commonality, with international and national travel restrictions, physical distancing and isolation. As previously mentioned, these present a broad range of operational challenges to pharmaceutical and biotech companies, and Scancell is unlikely to be immune. In our view, the areas of greatest COVID-19 related sensitivity and uncertainty for Scancell are likely to centre on its R&D operations.

Timelines likely to be impacted… for all but COVID-19 related activities

For all development-stage companies there is potential for clinical and regulatory timelines to slip due to knock on effects of restrictions on movement. For an early-stage company such as Scancell, this could be relevant to activities at clinical research organisations (CRO), patient recruitment and follow-up, and stretched healthcare resources including limited availability of intensive care beds (an important safety net for Phase I first-in-man studies). However, the necessary reprioritisation of scientific, clinical, and medical resources would mean that any R&D work on a COVID-19 vaccine is likely to be actively encouraged and permitted as an 'essential activity'.

On balance, the positive scientific and commercial opportunities presenting through the development of a COVID-19 vaccine should more than offset any likely delays to the oncology vaccine programmes or work in closing any further AvidiMab collaboration deals.

Exhibit 3: Summary of financials

Year-end: April 30 £'000s	2016	2017	2018	2019	2020E	2021E
INCOME STATEMENT						
Revenues	**0**	**0**	**0**	**0**	**0**	**0**
Cost of goods sold	0	0	0	0	0	0
Gross Profit	**0**	**0**	**0**	**0**	**0**	**0**
R&D expenses	(2,009)	(2,766)	(2,855)	(4,152)	(4,633)	(5,560)
General and administrative expenses	(1,034)	(1,783)	(2,087)	(2,577)	(2,202)	(2,100)
Underlying operating profit	**(3,043)**	**(4,549)**	**(4,942)**	**(6,729)**	**(6,835)**	**(7,660)**
Other revenue/expenses	0	0	0	0	0	0
EBITDA	**(3,021)**	**(4,516)**	**(4,914)**	**(6,708)**	**(6,816)**	**(7,640)**
Operating Profit	**(3,043)**	**(4,549)**	**(4,942)**	**(6,729)**	**(6,835)**	**(7,660)**
Interest expense	14	53	3	15	11	7
Profit Before Taxes	**(3,030)**	**(4,495)**	**(4,939)**	**(6,714)**	**(6,824)**	**(7,653)**
Adj. PBT	**(3,030)**	**(4,495)**	**(4,939)**	**(6,714)**	**(6,824)**	**(7,653)**
Current tax income	446	950	745	1,087	1,104	1,279
Cumulative preferred stock dividend	0	0	0	0	0	0
Net Income	**(2,583)**	**(3,545)**	**(4,195)**	**(5,627)**	**(5,720)**	**(6,374)**
EPS (p)	**(1.1)**	**(1.4)**	**(1.3)**	**(1.5)**	**(1.2)**	**(1.4)**
Adj. EPS (p)	**(1.1)**	**(1.4)**	**(1.3)**	**(1.5)**	**(1.2)**	**(1.4)**
DPS (p)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Average no. of shares (m)	227.6	261.6	312.7	387.0	458.5	465.4
Gross margin	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
BALANCE SHEET						
Current assets	**7,088**	**3,523**	**11,145**	**7,069**	**4,798**	**8,476**
Cash and cash equivalents	6,527	2,672	10,303	4,560	3,543	7,046
Accounts receivable	121	102	97	678	155	155
Inventories	0	0	0	0	0	0
Other current assets	440	749	745	1,831	1,100	1,275
Non-current assets	**3,480**	**3,508**	**3,492**	**3,474**	**3,467**	**3,459**
Property, plant & equipment	65	93	77	59	51	44
Other non-current assets	0	0	0	0	0	0
Current liabilities	**(576)**	**(532)**	**(696)**	**(1,205)**	**(778)**	**(10,778)**
Short-term debt	0	0	0	0	0	(10,000)
Accounts payable	(576)	(532)	(696)	(1,205)	(778)	(778)
Other current liabilities	0	0	0	0	0	0
Non-current liabilities	**0**	**0**	**0**	**0**	**0**	**0**
Long-term debt	0	0	0	0	0	0
Other non-current liabilities	0	0	0	0	0	0
Equity	**9,992**	**6,499**	**13,941**	**9,337**	**7,486**	**1,157**
Share capital	22,047	22,047	33,749	35,026	38,854	38,854
Other	(12,055)	(15,548)	(19,808)	(25,690)	(31,368)	(37,697)
CASH FLOW STATEMENTS						
Operating cash flow	**(2,327)**	**(3,841)**	**(4,060)**	**(7,018)**	**(4,833)**	**(6,483)**
Profit before tax	(3,030)	(4,495)	(4,939)	(6,714)	(6,824)	(7,653)
Non-cash adjustments	44	31	(41)	(248)	50	59
Change in working capital	(12)	(25)	169	(71)	95	0
Interest paid	4	6	3	15	11	7
Taxes paid	667	642	749	0	1,835	1,104
Investing cash flow	**10**	**(14)**	**(11)**	**(3)**	**(12)**	**(13)**
CAPEX on tangible assets	0	(61)	(11)	(3)	(12)	(13)
Other investing cash flows	10	47	0	0	0	0
Financing cash flow	**5,786**	**0**	**11,702**	**1,277**	**3,828**	**10,000**
Proceeds from equity	5,786	0	11,702	1,277	3,828	0
Increase in loans	0	0	0	0	0	10,000
Other financing cash flow	0	0	0	0	0	0
Net increase in cash	**3,468**	**(3,855)**	**7,631**	**(5,743)**	**(1,017)**	**3,504**
Cash at start of year	3,059	6,527	2,672	10,303	4,560	3,543
Cash at end of year	**6,527**	**2,672**	**10,303**	**4,560**	**3,543**	**7,046**
Net cash at end of year	**6,527**	**2,672**	**10,303**	**4,560**	**3,543**	**(2,954)**

Source: Scancell, Trinity Delta Note: Adjusted numbers exclude exceptionals. The short-term debt in FY21 is indicative of the company's funding requirement

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Disclaimer

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